

## **DETAILED ACTION**

### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stephen E. Kabakoff on June 18, 2010.

The following claims have been amended as follows:

**Regarding independent claim 17, (Currently Amended)** A radio telephony network supporting at least one link of a radio channel for a packet data transmission service, the network comprising: a plurality of network controllers, each network controller being connected via an interface to at least one base radio station, the at least one base radio station supervising at least one macrocell; and at least one base radio microstation connected to a network controller in the plurality of network controllers via an interface of the same type as that connecting the at least one base radio station to the network controllers, the at least one base radio microstation supervising at least one microcell incorporated in the at least one macrocell and centered at a point different from the point at which the at least one macrocell is centered, the at least one base radio microstation providing the packet data transmission service in the at least one microcell on the at least one link of the radio channel using a multi-carrier

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radio access, and the at least one base radio station providing the packet data transmission service in areas of the at least one macrocell other than in the at least one microcell, wherein at least one base radio station providing the packet data transmission service includes at least one protocol structure comprising a first set of protocol levels for transmitting packet data according to ~~is capable of being updated at the base radio station from providing~~ a first type of radio access used in the at least one macrocell and a second set of protocol levels for transmitting packet data according to ~~providing~~ the multi-carrier radio access used in the at least one microcell, the second set of protocol levels including a physical level and at least one protocol level located above the physical level for controlling the multi-carrier radio access, wherein the second set of protocol levels provides packet data transmission without modifying higher levels and in the first set protocol levels.

**Regarding independent claim 36** (Currently Amended) a method of providing a packet data transmission service in a network, the network comprising at least one macrocell and at least one microcell located within the at least one macrocell, the method comprising: providing, using at least one base radio station in the at least one macrocell, the packet data transmission service using a first type of radio access; providing, using at least one base radio microstation in the at least one microcell, the packet data transmission service using a multi-carrier radio access different from the first type of radio access; and updating at least one base radio station providing the packet data transmission service from using the first type of radio access to using the multi-carrier radio access,

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wherein the updating occurs at the at least one base radio station and the at least one base radio station includes at least one protocol structure comprising a first set of protocol levels for transmitting packet data according to a first type of radio access used in the at least one macrocell and a second set of protocol levels for transmitting packet data according to the multi-carrier radio access used in the at least one microcell, the second set of protocol levels including a physical level and at least one protocol level located above the physical level for controlling the multi-carrier radio access, wherein the second set of protocol levels provides packet data transmission without modifying higher levels and in the first set protocol levels.

Please cancel claims 39-42.

**Reasons For Allowance**

2. The following is an examiner's statement of reasons for allowance:
3. Claims 17, 19-38 (renumbering as 1-21) are allowed.

The present invention relates to radio telephony network for providing multicarrier packet data transmission services in a macrocell, microcell that is controlled by a radio base station. The method includes updating the packet data service from a microcell that is CDMA-based to an OFDM-based service in microcell. Each independent claim uniquely identifies the distinct claimed features.

**Regarding independent claim 17, (Currently Amended)** A radio telephony network supporting at least one link of a radio channel for a packet data transmission service, the network comprising: a plurality of network controllers, each network controller being connected via an interface to at least one base radio station, the at least one base radio station supervising at least one macrocell; and at least one base radio microstation connected to a network controller in the plurality of network controllers via an interface of the same type as that connecting the at least one base radio station to the network controllers, the at least one base radio microstation supervising at least one microcell incorporated in the at least one macrocell and centered at a point different from the point at which the at least one macrocell is centered, the at least one base radio microstation providing the packet data transmission service in the at least one microcell on the at least one link of the radio channel using a multi-carrier radio access, and the at least one base radio station providing the packet data

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transmission service in areas of the at least one macrocell other than in the at least one microcell, wherein at least one base radio station providing the packet data transmission service includes at least one protocol structure comprising a first set of protocol levels for transmitting packet data according to ~~is capable of being updated at the base radio station from providing~~ a first type of radio access used in the at least one macrocell and a second set of protocol levels for transmitting packet data according to ~~providing~~ the multi-carrier radio access used in the at least one microcell, the second set of protocol levels including a physical level and at least one protocol level located above the physical level for controlling the multi-carrier radio access, wherein the second set of protocol levels provides packet data transmission without modifying higher levels and in the first set protocol levels.

**Regarding independent claim 36** (Currently Amended) a method of providing a packet data transmission service in a network, the network comprising at least one macrocell and at least one microcell located within the at least one macrocell, the method comprising: providing, using at least one base radio station in the at least one macrocell, the packet data transmission service using a first type of radio access; providing, using at least one base radio microstation in the at least one microcell, the packet data transmission service using a multi-carrier radio access different from the first type of radio access; and updating at least one base radio station providing the packet data transmission service from using the first type of radio access to using the multi-carrier radio access, wherein the updating occurs at the at least one base radio station and the at

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least one base radio station includes at least one protocol structure comprising a first set of protocol levels for transmitting packet data according to a first type of radio access used in the at least one macrocell and a second set of protocol levels for transmitting packet data according to the multi-carrier radio access used in the at least one microcell, the second set of protocol levels including a physical level and at least one protocol level located above the physical level for controlling the multi-carrier radio access, wherein the second set of protocol levels provides packet data transmission without modifying higher levels and in the first set protocol levels.

The closest prior arts, Lijja '847 and Chen '933 fail to teach or suggest claimed features: "one base radio station includes at least one protocol structure comprising a first set of protocol levels for transmitting packet data according to a first type of radio access used in the at least one macrocell and a second set of protocol levels for transmitting packet data according to the multi-carrier radio access used in the at least one microcell, the second set of protocol levels including a physical level and at least one protocol level located above the physical level for controlling the multi-carrier radio access, wherein the second set of protocol levels provides packet data transmission without modifying higher levels and in the first set protocol levels".

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Claims 17, 36 are allowed since the closest prior arts either singularly or in combination fail to anticipate or render the uniquely distinct claimed features obvious.

**Dependent claims 19-35, 37-38** are allowed by virtue of their dependency on claims 17 and 36.

4. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Barak et al (US 2004/0077349 A1), Fors et al (US 2004/0203788 A1), Miya et al (US 2002/0105932 A1), Kalavade et al (US 2002/0191575 A1).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CANDAL ELPENORD whose telephone number is (571) 270-3123. The examiner can normally be reached on Monday through Friday 8:00AM to 5:00PM EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Bin Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Candal Elpenord/

Examiner, Art Unit 2473

/KWANG B. YAO/

Supervisory Patent Examiner, Art Unit 2473